Surge Capacity Planning Issues

Robert Gougelet MD
Assistant Professor Medicine
(Emergency Medicine)
Dartmouth Medical School

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Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

CDC & HRSA GUIDELINES

- Establish a response system that allows the immediate deployment of 250 or more additional patient care personnel per 1,000,000 population in urban population areas. (125 rural)
- Off site options for increasing bed capacity such as mobile facilities, temporary facilities appropriate to austere environments, large convention halls, armories, and state fair grounds.

Ambulatory Care Centers (ACC)

- Inpatient medical services-hospital locked down, or simply overwhelmed.
- Definitive care-IVs, Antibiotics, hydration, pain meds, respiratory care.
- 250 Bed Pods, five 50 bed nursing units.
- Medical personnel- 1 MD, 1 PA, 6 RNs or LPNs, 4 nursing assistants plus 14 support personnel.

Neighborhood Health Center (NEHC)

- High volume point of distribution, prophylaxis medicines and self-help information.
- Coordinating center with private MDs, community outreach, area hospitals, ACCs, fatality management.
- Stabilization, worried well, medicines, public health, patient registration and information.
- Medical Staffing- 80 Total staff including 6 physicians and seven nurses.
- (2) twelve hour shifts- 1,000 patients.
- Expandable facility, coordinate with EMS, community resources.

Clinic Models

- Small Pox Clinics- 6,000 pts 24hr.
- NYC Anthrax Postal Mission total: 7,076 patients/68 hr period.
  - 2,452 pts 1st 24 hr.
  - 3,875 pts 2nd 24hr.
  - 749 last 24 hr.
- Non-medical model NYC 1500 pts/hr.
- Technological improvements are needed.

NEHC vs. Small Pox Clinic

Staffing levels for NEHC converted to VC (two 8-hr shifts):

	NEHC	+ Addition	= VC
Medical Dir/Administrator	4	-	4
Logistician/Transport Manager	4	-	4
Medical Clerk	32	(12)	20
Physician/Physician Extender	8	(4)	4
Nurse/Nurse Assist	16	25	41
Paramed/EMT	18	-	18
Social Worker	-	8	8
Volunteers (Non affiliated)	70	24	94
Total	152	41	193

Commitment to help staff non-hospital field medical units by Incident and Profession

	Physician*	Nurse*
NATURAL DISASTER.....	83% (461)	90% (2499)
EXPLOSION INCIDENT.....	67% (372)	70% (1941)
CHEMICAL INCIDENT.....	59% (329)	59% (1644)
BIOLOGICAL INCIDENT.....	56% (315)	53% (1474)
CONTAGIOUS EPIDEMIC.....	56% (312)	49% (1352)
RADIOLOGICAL INCIDENT.....	52% (290)	45% (1254)

* number of physicians, n = 559 and nurses, n = 2775 responding

What's wrong with this picture?

Essential Support Functions

- All ESFs may be needed to safely and efficiently provide medical care.
- Significant logistical support is necessary to support the most basic free standing health center.
- When calculating pt flow consider all potential bottlenecks i.e. parking, translation, complicated medical patients etc.
- Smooth interface with mutual aid, state, regional and federal resources is critical.
- Don’t underestimate the need for adequate security.

Regional Hospitals

- Regional Hospitals- Specialized care not easily available, maintenance of normal day to day activity is essential.
- Significantly increased role during a mass casualty event.
- Increased planning role likely involving several state area.
- Obligation to collaborate with other area regional hospitals for back-up, shared resources, regional exercises, and education.

Regionalization

- Unable to provide adequate resources at all times at all locations.
- Balance resources based on population, geography, budget priorities, risk assessment.
- Regional response will be incident specific and possibly limited.
  - Chemical, radiological, and conventional: likely self limited.
  - Biological: especially contagious, potentially unlimited.
- Support local response.

NH Small Pox Planning Sites

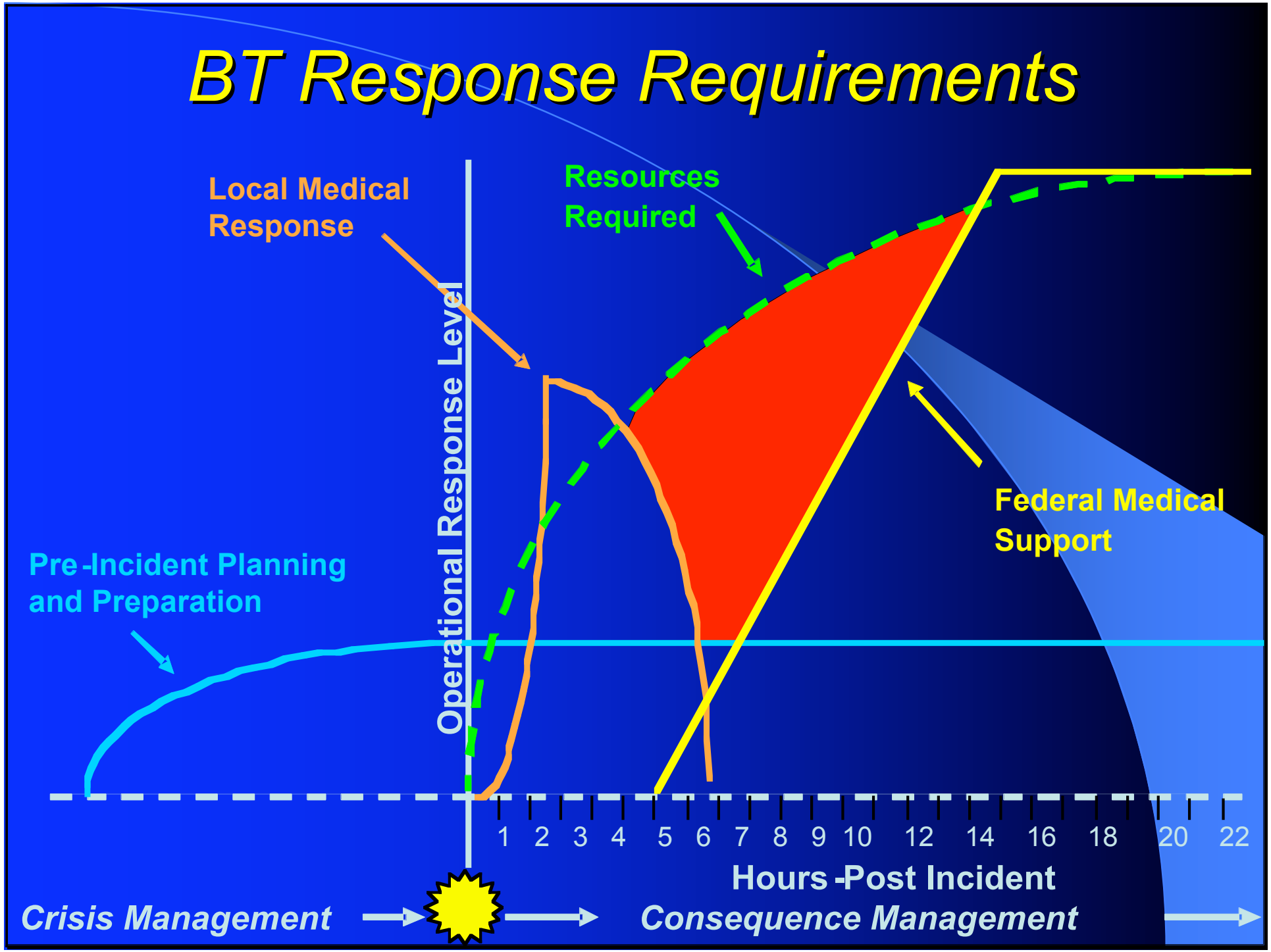
- 29 sites throughout New Hampshire serving 240 towns.
- Essential component of public health response.
- Geographical & population distribution, then modified according to usual catchment area.
- Broad based leadership-politicians, EMS, law enforcement, Health, hospital, Emergency Management.

Security Resources

- CDC plan would utilize 10% of security resources within the state of NH.
- Including licensed police officers, correctional officers, private security & crossing guards, supervisory officers, etc.
- 7,840 total versus 740 needed.
- Strategies to be developed i.e. train in advance volunteers from community support agencies, limit #s personnel needed to carry weapons.
- Riots in China & Algeria.

Atropine Availability

- Must be available in local community.
- EMS Providers-pre-filled syringes.
- EDs-Pre-filled syringes.
- Bulk stock- hospitals & regional capacity.
- Key partners: Hospitals, EMS, Law Enforcement.


BT Response Requirements
Local Medical Response
Resources Required
Federal Medical Support
Pre-Incident Planning and Preparation
Operational Response Level
1 2 3 4 5 6 7 8 9 10 12 14 16 18 20 22
Hours-Post Incident
Crisis Management
Consequence Management

Final Points

- The first line of response = local community's healthcare and EMS system.
- Identify and work with key partners early on.
- Anticipate secondary attacks against healthcare facilities and first responders.
- Family support and community mental health services should be key components of response.
- Economic impact of not planning and exercising can be enormous.
- Planning for an unlikely event, or an event affecting thousands to hundreds of thousands of patients is extremely difficult.

Contact Information

- Rgougelet@Dartmouth.edu
- Phone- 603-650-3839.
- Mr. James Church-410-436-5686.
- http://hld.sbccom.army.mil/.